10/725,298

IN THE ABSTRACT

Please amend the Abstract as follows:

A method of clustering communication nodes based on network attributes such as network delays and forwarding capacity; on communication interest attributes; and on application attributes such as quality of service preferences/constraints ~~(e.g. end-to-end delay constraints, bandwidth constraints)~~ in providing communications between users and application servers. A multi-attribute communication feature vector is formed. That vector is comprised of network attributes ~~(such as available bandwidth, client location attributes in the IP map)~~, communication interests attributes, ~~(client request for content updates, client subscription to specific data items or to a set of proximal data sources in network space or application/virtual space)~~ and quality of service requirements ~~(such as delay and loss constraints~~ and is used to ~~from~~ form efficient group communication mechanisms for distributed collaborative applications. Then the multi-attribute communication feature vectors are clustered. The clustering methods for multi-type attribute feature vectors are: iterative clustering using a generalized distance space with normalized attribute subspace metrics; fusion clustering, and nested clustering.